KNIXON

18 November 1950

SUBJECT: Summary of Communications Conditions

FROM: [redacted]

TO: [redacted]

To help establish the series of events after arrival [redacted] a brief review of the operational requirements as understood by the Communications Division prior to arrival, is herewith set forth:

1. The VHF communications link air-ground was to be established between coastal locations and an aircraft approximately 20 miles off the coast line.

2. Into this coastal area would be placed a maximum of twenty VHF transmitters.

3. Information as to the exact method of placement was not advanced until about two weeks prior to leaving for LCDrink.

4. The HTStein training area was to train and supply a signal plan to be used if the approved plan "OMEGAT" could not arrive in time to be used.

5. The agent teams were composed of sub-caliber types with very limited ability.

6. Crypto applications were to be of the most simple type not to include names, locations, unless defined in advance by pre-arranged indicators.

7. A minimum of three (3) contacts a week per area for all teams was established as an operational requirement to be supported by the plan and existing facilities.

8. Exact operational details such as amounts of other materials would be carried, and most important areas of movement, approximate re-supply schedules, and availability of flight personnel, etc. were not included in the Commo coordination.

9. Interested people in ZRMetal asked for an explanation of "OMEGAT" which was forthwith given. During this briefing the fact of a maximum of 10 hours of communications work on a full plan was brought out without any apparent conflict between the Commo requirements and the operational ability to back up the need.

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10. Prior to leaving ZRMetal, Operations was told they would need at least three aircraft to support two areas. However, it must be admitted that two aircraft were acknowledged to be technically able to supply communications. This allows no margin for error.

11. The greatest single failure was a persistent attitude that operational details of all types could be separated from a communications mission such as is called for by BOFiend. This attitude was not found to exist in any form in the field, only in ZRMetal.

All plans by the Communications Division of ZRMetal were made around the above points. While a number of minor conflicts were expected, a few very important details have made it evident that sufficient coordination did not exist, as follows:

1. The first teams were not coastal but went into two mountain ranges deep in areas never told about during ZRMetal planning. These areas present terrain problems of the highest order. To obtain any degree or reliable communications it was necessary to profile many sample areas, and then to make a special contour map and last minute team training in its meaning. This contour map was made of the entire country showing the areas where communications would be expected and those areas where communications would be impossible. The profile plots showed operational flights as high as 30,000 feet would be required for line of sight transmissions in many areas. Therefore, contour locations were established for flights of 12,000 feet.

2. Because the field teams were found to be intended solely for mountain work with all equipment carried by the men on their backs, the last minute carrying cases made in HTStein were found to be unsuitable for this type of service. Local fields trips proved a pack-rack of some type to be more suitable but time forced the issue and a carrying box for the transmitters was used.

3. All teams objected very greatly to giving names, places, etc. of resistance groups, locations in plain language. Here the crypto plan, as set up under ZRMetal's simple requirements, proved to be inadequate for the actual field job. (Crypto cable out for change).

4. The entire communications program of training, operating, translating, and flying as commo officer rested upon one man, who was not aware of his responsibilities and duties until the actual date of operation.

5. While from a purely technical standpoint sufficient equipment is on hand to service both QKStair and BOFfend requirements, the limitation of flight crews and a single air commo man make recruiting imperative for a steady operation. There is no reserve for any amount of unforeseen trouble.

6. The greatest point of confusion was that nobody this side of ZRMetal seemed to be aware of the interlocking effect of the Pixie and Dreamer shows from a communications standpoint; and that ZRMetal was planning the use of over 40 transmitters between these areas. This fact made all of the Commo planning in HTStein worthless, as it could only handle three teams and required a flight every night. Local equipment conditions cannot support any more than two flights a week if a reserve for break-downs is to be maintained. At present there are not enough Commo personnel to support more than two flights per week in Pixieland, and no flight into Dreamland can be at present laid on.

7. Due to the requirements of multi-team operations, the HTStein plan had to be scratched and "OMEGAT" started. This required intensive training and some field problems by the time of the first drop. In a way it was fortunate that the first drop was aborted due to weather, for that allowed more complete training of the teams commo-wise. By the date of the second drop the teams worked all Commo problems with confidence and showed an understanding of the basic requirements for VHF communications.

8/ Some internal confusion resulted in transfers of equipment between HTStein and LCDrink. Flight tests in this area proved the equipment to have only a twenty-mile range which conflicts with the 70 to 100 miles in tests in the HTCurio. A second group of test flights were run with both types of antennas employed so an impartial comparison could be made. The HTStein installation still gave a very limited range over this terrain; the HTCurio installation gave a range of approximately 70 miles without trouble. Technically, the HTStein installation of the ground sets had many fine features. However, the human element plus a field strength meter proved the original installation to be more universal and much simpler without the great proximity effects of the dipole antenna as held by the operator. It is felt that the present antennas, both air and ground, are not the best for this application. After studying the areas of operation, the coastal zone will present a different problem.